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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,096	09/09/2003	Bamdad Bahar	0769-4624US5	9845

7590 11/27/2006
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345 Park Avenue
New York, NY 10154

EXAMINER

MARTIN, ANGELA J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,096

Applicant(s)

BAHAR ET AL.

Examiner

Angela J. Martin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17, 18 and 20-26 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-15, 17, 18, 20-26 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is responsive to the Amendment After Final filed on November 11, 2006. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15, 17, 18, 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al., U.S. Pat. No. 6,059,943, in view of Koslow, U.S. Pat. No. 5,147,722.

Rejection of claims 1-15, 17, 18, 20-26 drawn to a polymeric membrane.

Murphy et al., teach a substantially air impermeable polymeric membrane comprising a polymeric sheet (col. 9, lines 34-36) comprising polymer and having a porous structure (col. 9, lines 9-12), the sheet having distributed in the polymer: inorganic particulate (col. 8, lines 47-51), metal (col. 8, lines 52-58), organic polymer (col. 8, lines 58-62), or a combination (col. 8, lines 47-62), and the porous structure is at least partially filled with an ion-exchange particles to provide ionic conductance (claim 1). It teaches the sheet has precious metal, or silica (col. 3, lines 1-9), or titania (claim 4), or carbon (col. 13, lines 65-67 and col. 14, lines 1-3), or platinum distributed therein

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(col. 14, lines 1-3). It teaches the polymeric sheet is porous expanded PTFE (col. 12, lines 1-10). It teaches membrane is disposed between two fuel cell electrodes (col. 13, lines 64-67 and col. 14, lines 1-6). It teaches porous structure is filled with metal salts (col. 12, lines 42-55). It teaches the ion-exchange membrane is fluorinated (col. 8, lines 47-67 and col. 9, lines 1-8). It teaches the polymer has a cross-linked structure (Fig. 2 and 6).

Koslow teaches a polymeric membrane comprising ion-exchange resin (col. 25, lines 15-35) wherein the polymeric sheet has silica or fumed silica distributed therein (col. 16, lines 65-67 and col. 17, lines 1-7).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert the teachings of Koslow into the teachings of Rusch et al., because Koslow teaches that the addition of fumed silica can alter the stiffness of the membrane and improve the strength of the structure. With respect to the sheet thickness and the porosity, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose an optimum thickness and porosity, since it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bahar et al., U.S. Pat. No. 5,599,614, teach a composite membrane including an ion exchange resin, fibrils.

Response to Arguments

4. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-1288. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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